

**CALFED Staff Recommendation
on the
Tracy Experimental Fish Facility (TEFF)
1/21/99**

Recommendation

The Staff recommends that the USBR consult with the CALFED agencies in finalizing the feasibility report and begin preparation of final designs, operation and evaluation criteria for the TEFF. Final design and environmental documentation should be complete so that construction can start on or before June 2000 and be completed by Fall 2002. The facility will be a fully functional Demonstration Fish Screen and Handling Facility capable of screening 2,500 cfs at 0.2 fps through-screen velocity and 5,000 cfs at 0.4 fps through-screen velocity. Screen operation would follow established criteria by NMFS, FWS, and DFG. Evaluations of the facility should be complete within seven years of the CALFED EIR/EIS ROD (Stage 1) in time to allow expanded development of the Tracy Fish Facility or new fish facilities at CCF by the end of Stage 1.

Background

The CALFED Interagency Fish Facilities Technical Team concluded in their July 28, 1997 report that there are certain informational needs requiring resolution before any concept for screening and salvage can be finalized. In the South Delta, information is needed on such key components such as:

- Hydrodynamic conditions due to proposed operational scenarios;
- Debris management as new aquatic plants increase in diversity and abundance;
- Fish collection at the bypasses and transport back to the Delta; and
- Fish holding facilities.

New facilities shall not be designed like the existing system due to the problems with debris, poor hydraulic conditions, predation, and entrainment losses. Fish sorting, "fish friendly" lifts, debris separators, and alternative fish transport should be integrated with the new facility.

The Report further recognized the need to improve the Tracy Fish facility regardless of the CALFED actions by stating:

The existing Tracy louver facilities require major capital improvements merely to keep them operational for the next 10-15 years. The Team recommended a replacement facility there using best feasible technology positive barrier screens. This facility could be used as a pilot facility for expanded facilities and even be a part of future screen facilities in the South Delta. However, upgrading the Tracy Fish Facility should be done within an overall, long-term solution package that has been committed to.

The CALFED Interagency Fish Facilities Technical Team recommended in their June 16, 1998

meeting that:

If the CALFED decision is to maintain two diversions in the south Delta (Tracy and north end of CCF), the follow staging is recommended:

"1) Construct by the year 2,000 a research screening facility at Tracy that can eventually become a production facility. The facility would consist of a 1,500 to 3,000 cfs module "V" type screen that could be replicated in the south Delta. Use this facility to conduct research on components and programs that would lead more efficient designs in the south Delta (such as trash racks, screening velocities, bypasses, screen material and orientation, fish handling and sorting, debris management, cleaning, transportation, etc.)

2) Start the planning, permitting and design process for a 5,000 to 7,000 cfs screening production screening facility (with capability for research and modification) at north end of CCF. It is anticipated that construction would not start for two to three years and the design would consider the research information from the facility at Tracy. Both facilities would be designed for 0.2 fps approach velocity with capability to increase to 0.4 fps at certain periods.

3) Start the planning and the design of the SWP/CVP Intertie.

If the CALFED decision is to construct a joint SWP/CVP screening facility at the north end of CCF, the follow staging is recommended:

1) Start the planning, permitting and design process for a first stage 5,000 to 7,000 cfs joint SWP/CVP screening research and production screening facility at north end of CCF. Design the facility in modules for research and production, with capability to be expanded to 15,000 cfs in the future. It is anticipated that the initial stage would be completed in two to three years. Design for a 0.2 fps approach velocity with capability to increase to 0.4 fps at certain periods.

2) Start the planning and the design of the SWP/CVP Intertie.

The team also determined the main advantages of separate and joint Facilities (at build out).

Separate Facilities

- *Flexibility (may have biological and water quality advantage especially without barriers)*
- *Redundancy of system*
- *USBR has been mandated to fix their screens*
- *USBR can start immediately and may have constructed by 2000*

Joint Salvage Facility

- *Economies of scale*
 - *Capital cost*
 - *Operations cost*
- *One joint salvage and research facility*

- *Research done at one joint facility - better coordination, transferability, and no duplication of effort*
- *Little or no potential stranded cost (capital and O&M)*

The DEFT Team in its September 1998 recommendations to the Phase 2 in report proposed that the Tracy facility would be operated for the following purposes:

- *Will improve survival of salvaged fish at the Tracy pumping plant.*
- *Will reduce entrainment at the Tracy pumping plant.*
- *Will provide valuable information for design of future fish facilities.*

CALFED Staff Consideration

Given the uncertainty of the biological and water quality benefits of one CCF diversion or two diversions at CCF and Tracy, an adaptive management approach appears to be most prudent. Initial evaluation of the components of the TEFF and monitoring in the CMARP program during Stage 1 could lead to several options for the complete screening of the south Delta export facilities by the end of Stage 1. Some are:

1. Expansion and conversion of the TEFF to a full production 4,600 cfs facility and a 10,300 production facility at the CCF.
2. Leave TEFF as a research and back up facility, construct the intertie, and develop a full production facility of 15,000 at CCF.
3. A combination.

TEFF is the only option that can feasibly be implemented early in Stage 1. The research work at TEFF could provide the most timely information needed to ensure the feasibility of any of the options. In any option, full new best feasible technology screening of the south Delta export facilities should be accomplished in Stage 1.